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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,604	01/20/2004	Jonathan H. Liu	42P8821C	4280

8791 7590 02/16/2007
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EXAMINER

ELAMIN, ABDELMONIEM I

ART UNIT	PAPER NUMBER
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2116

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/761,604

Applicant(s)

LIU ET AL.

Examiner

Abdelmoniem Elamin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 6-9, 11-14, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al, US. Pat. No. 5,794,020.

3. Claims 6, 11, Tanaka teaches an apparatus [Fig. 1] comprising:

a variable delay device [117 of Fig. 1] having an output [see the output of the variable delay circuit 1 of Fig. 1, which is coupled to Judging circuit 7], a first input [from the input buffer circuit 116 of Fig. 1], and a second input [the output 136 of the judging circuit 7 of Fig. 1]; and

a detector [Judging circuit 7 of Fig. 1] having a first input [output of XOR 5 of Fig. 1], a second input [134 of Fig. 1], and an output, the first input of the detector being coupled to the output of the variable delay device to receive a first clock signal [the first input is coupled to the output of the variable delay circuit 117, see Fig. 1], and the output of the detector being coupled to the second input of the variable delay device to cause the variable delay device to adjust the first clock signal to align an edge of the first clock signal with a center of a data packet [the output 136 of the judging circuit 7 of Fig. 1, see also Fig. 6, col. 7, lines 57-61].

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4. Claims 7, 12, Tanaka teaches a clock generator coupled to the first input of the variable delay device to provide a second clock signal to the variable delay device, which generates the first clock signal from the second clock signal [*clock generator 103 of Fig. 2*].
5. Claims 8, 13, Tanaka teaches the data packet is input to the second input of the detector [*134 of Fig. 1, see related disclosure*].
6. Claims 9, 14, Tanaka teaches the variable delay device comprises a delay line [*element 2 of Fig. 1*].
7. Claim 16, Tanaka teaches a processor coupled to the memory controller [*inherently, memory controllers comprises a processor*].

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al, US. Pat. No. 5,794,020.
10. Claims 10, 15, Tanaka fails to teach the detector comprises a quadrature phase detector.

Official Notice is taken that both the concept and the advantages of quadrature phase detector is old and well known in the art.

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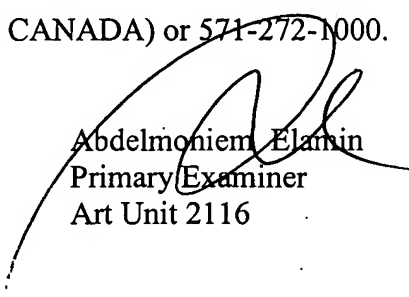
It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Tanaka to include a quadrature phase detector, because of its high sensitivity.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdelmoniem Elamin whose telephone number is 571-2727-3674. The examiner can normally be reached on MON - THUR 10:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Prveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Abdelmoniem Elamin
Primary Examiner
Art Unit 2116

February 14, 2007